PHS156
HEALTH INSURANCE COVERAGE AND UTILIZATION OF PRENATAL CARE IN THE UNITED STATES
Zelle L
GFR Custom Research, Wayland, MA, USA
OBJECTIVES: Early and adequate prenatal care has been demonstrated to impact pregnancy outcomes from both the maternal and neonate perspective. Lack of adequate prenatal care has been tied to low birth weight (and associated morbidities) as well as higher rates of maternal mortality.[1] The objective of this study was to examine the correlation between insurance coverage and prenatal care utilization in the United States to determine whether increased rates of coverage following the implementation of health care reform had an impact on prenatal care utilization. METHODS: Data from the CDC and the US Census Bureau were used to establish prenatal care utilization rates, and health insurance coverage rates among women of childbearing age from 2010 to 2014. RESULTS: The rate of women of childbearing age who were uninsured decreased from 17.9% in 2010 to 12.1% in 2014. The percent of live births associated with early prenatal care (first trimester) increased from 74% in 2010 to 76% in 2014. However the percent of births associated with no prenatal care increased slightly from 1.6% in 2010 to 1.7% in 2014. CONCLUSIONS: This study demonstrated that since 2010, the rate of insurance coverage among women of childbearing age has increased, and this is correlated to an increase in early prenatal care utilization. Further study is needed to understand the effect of non-insurance barriers to prenatal care access and utilization in the post-health care reform era.

PHS157
SOCIAL IMPACT OF A PRENATAL HEALTH CARE PROGRAM AT A HEALTH INSURER IN COLOMBIA
Arevalo HO1, Guarín R1, Martínez-Galindo IM2, Moreno JA3, Díaz JA3
1Salud Total EPS, Bogotá D.C., Colombia, 2Universidad Nacional de Colombia, Bogotá D.C., Colombia
Reducing maternal mortality and perinatal mortality is part of the development objectives of a country. The indicator of potential productive years of life lost (PPYLL), is an impact measure that represents the loss that a society suffers as a result of premature deaths OBJECTIVES: To estimate the PPYLL avoided by a prenatal healthcare program in a cohort of pregnant women insured by comparing the results with global indicators for the country. METHODS: The study was conducted in a cohort of 87,000 pregnant women who were under the prenatal healthcare program in the period from 2011 to 2015 in 16 cities of Colombia. The mean age was 28.7 years and 31.5% had a primary education. The indicators maternal mortality ratio and perinatal mortality rate were compared between the insurer and the country. The denominators of the insurer company were used to calculate the frequency of the event. The social impact was calculated by the PPYLL-ipc model in which deaths were weighted according to a balance between investment, production and consumption potential of each individual, according to the stage of productivity in which the deaths occurred. PPYLL were multiplied by the per capita GDP of Colombia in 2013 to estimate the average income that gained society by averted maternal and perinatal deaths. RESULTS: The prenatal healthcare program in pregnant women avoids 43 perinatal deaths and 24 maternal deaths, equivalent to 1,417 PPYLL and $11,316,075 USD in productivity. CONCLUSIONS: prenatal healthcare program of the insurer compared with the results of the country showed a decline in maternal and perinatal deaths with consequent productivity gains to society.

PHS158
PREVENTIVE CARE SCREENING PATTERNS AMONG WOMEN WITH MEDICAID
Benavidez MM1, Miller JD1, Cai Q1, Troeger KF1, Pelham S1
1Truven Health Analytics, Cambridge, MA, USA, 2Hologic, Inc., Marlborough, MA, USA
OBJECTIVES: To describe preventive care screening rates among Medicaid-insured women ages 40-65 with respect to utilization of screening mammography. METHODS: The Truven Health MarketScan Medicaid Multi-State Database was used to identify women ages 40-65 enrolled in Medicaid from 2009 through 2013. The data source includes administrative claims data from ~12 geographically-disperse Medicaid programs. Women were required to be continuously enrolled for the entirety of a 5-year study period. Women were stratified according to the receipt of a screening mammogram to measure the coincident prevalence of Pap screening or colonoscopy. RESULTS: A cohort of 82,875 women ages 40-65 had continuous enrolment from 2009 through 2013. Of these women, 43.8% had at least one screening mammogram during the study period, of which 52.1% had at least two and 36.7% had at least three. The average annual mammography screening rate increased steadily from 14.7% in 2009 to 18.4% in 2013. Women who received a screening mammogram were more likely to undergo other preventive screenings than those who did not: Pap test (65.8% versus 30.2%), colonoscopy/sigmoidoscopy (32.1% versus 12.4%). The rate of breast cancer diagnosis differed between women who received both screening and diagnostic mammography versus women who received only diagnostic mammography (4.2% versus 10.4%). Approximately one-third of all women (32.9%) did not receive a screening mammogram, Pap, or colonoscopy screening during the study period. DRPs: Clinical outcomes were the most populated, including patient satisfaction. Clinical outcomes are the most populated, including

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HEALTH TECHNOLOGY ASSESSMENT: A TRAILBLAZER IN BETTER PATIENT CARE
Machihikapala P1
1Chulalongkorn university, Thailand
OBJECTIVES: The main aim of the study was to assess and evaluate the Clinical Pharmacists' Pneumonia Intervention Program (CPPIP) and its application to improve and optimize patient care through pharmacological care and to achieve accuracy in patient treatment. METHODS: A prospective, observational, interventional, single-center study was conducted in a teaching hospital starting this present study. The outpatient medication charts and orders drug related problems were identified, analysed and rectified by ward and practicing clinical pharmacists within the inpatient pharmacy services, using the parameters: dose, rate of administration, premature discontinuation, presence of dosage error, necessity of additional medication, more proper alternative therapies, presence of relevant drug interactions, inconsistencies in prescription orders, physical-chemical incompatibility. Post-registration of these interventions were classified, resulting clinical interventions made. RESULTS: Out of 360 clinical pharmacist interventions followed, male (71.6%) predominance was noted over females (28.3%). Most of the DRP observed were dispensing errors (66.1%), improper drug selection (17.2%), followed by untreated indications (14.4%) Majority of the clinical pharmacist recommendations were on need for proper dispensing (66.1%), and drug change (18.6%). The acceptance ratio of implementing clinical pharmacist recommendations and changing drug therapy was found to be high (86.6%). Clinical pharmacists have greater potential in preventing and/or minimizing the DRPs. CONCLUSIONS: Technology assessment in health care is a multidisciplinary field of policy analysis which studies ethical, social, medical and economic implications of new drug development, diffusion, and diffusion of technology. From the Food and Drug Administration perspective, health technology assessment the methods followed for this study were found to be useful for not only enhancing the appropriate use of drugs in a clinical setting but also to sow a seed for the evolution of Health Technology Assessment in India with clinical pharmacist as its pathway.

PHS160
DEVELOPING BELIEFS THAT SUPPORT VACCINATION: RESULTS FROM THE PHARMACISTS’ PNEUMOCOCCIA PREVENTION PROGRAM
Mcelvee J1, Prioli K1, Scharer J2, Cannon-Dang E1, Harris LF1, Pizzi L1
1Thomas Jefferson University, Philadelphia, PA, USA, 2Center in the Park, Philadelphia, PA, USA
OBJECTIVES: Prior research has shown that older African Americans are at particularly high risk for decreased trust in the healthcare system due to historical incidence of racism, prejudice, and discriminatory practices. The primary objective of this study was to assess the effect of the Pharmacists’ Pneumococcal Vaccine Education Project (PVEP) on older adult’s beliefs about vaccines, vaccine safety and vaccination. METHODS: PVEP was delivered at Philadelphia senior centers and other community-based venues eight times in 2014, and consisted of: 1) formal presentation, 2) live skit, 3) small group action planning, and 4) optional PV. Participants delivered a 30-minute formal presentation on pneumococcal disease. Community senior center actors then performed a culturally-sensitive skit highlighting the value of vaccination. Next, participants met with a pharmacist in small group action planning sessions, then were offered a voluntary, no cost PV. A belief instrument consisting of 5 Likert items (1=completely agree, 4= completely disagree) was constructed using the results of a pilot survey and literature. The instrument was administered at baseline, post-test, and 3 months and assessed participants’ beliefs in the following domains: pharmacists as immunizers, physicians as immunizers, PV, and pneumonia awareness and importance. Primary study outcomes were changes in mean belief scores (baseline vs. post-test). Pairwise sample t-tests were performed to measure changes in mean belief scores. RESULTS: 203 older adults participated; the majority were female (74.9%), African American (80.3%), and had a mean age of 74.4 years. Statistically significant improvements in beliefs at post-test were observed in three belief domains: pneumococcal vaccine, physicians as immunizers, and pneumonia. At 3 months, there were statistically significant improvements in mean belief scores from baseline in the following categories: pneumococcal vaccine and pharmacists as immunizers. CONCLUSIONS: PVEP positively impacted beliefs post-program regarding PV, pharmacist immunizers, and pneumonia, however, sustained efforts may be needed to reinforce these gains.

PHS161
A REVIEW OF CURRENT QUALITY METRICS FOR EVALUATING PATIENT-CENTERED MEDICAL HOMES
Vanza S1, Lombardi M2, Maio V1
1Thomas Jefferson University, Philadelphia, PA, USA, 2Parma Local Health Authority, Parma, Italy
OBJECTIVES: The patient-centered medical home (PCMH) has emerged as a promising model for transforming the structure and organization of primary care. The goal of PCMHs is to achieve improved patient care by delivering the triple aim of better quality, experience and cost. Rigorous evaluations of the ability of PCMHs to accomplish their objectives are needed to assess the feasibility of implementation. We sought to explore the quality metrics that are currently utilized to assess PCMHs. METHODS: An expert panel conducted a cross-sectional survey using a Delphi method, SCOPUS and Google Scholar evaluating the published studies and reports that analyzed quality metrics used to assess PCMHs. Each measurement was analyzed and categorized by the following categories: access, clinical outcomes, economic, clinical and humanistic. RESULTS: Overall, a significant number of quality metrics for assessing PCMHs was found. Access outcomes are composed of various aspects including scheduling appointments, hours of operation, and provider access. Utilization management outcomes include use of healthcare services, including hospital, specialist, and nursing facility. Economic outcomes focus on spending of various healthcare services, such as inpatient, emergency department, pharmacist, and specialist costs. Humanistic outcomes incorporate patient- clinician satisfaction. Clinical outcomes are the most populated, including
preventive services, such as immunization and screening, and management of several diseases, diabetes, and cardiac conditions. Quality metrics for diseases focus mainly on process of care, while a few define prominent outcomes of care, such as HbA1c and BMI level. **CONCLUSIONS:** This review identified an abundance of quality metrics utilized to assess PCMH, yet only a few appear a true representation of the quality of care provided to patients. We urge entities and accreditation bodies involved in the establishment and implementation of PCMH to concur on and endorse a core set of standardized measures to evaluate the PCMH.

**PHS162**

OVERVIEW OF NATIONAL LEADING ORGANIZATIONS INVOLVED IN QUALITY OF CARE. **CONOCLOY**

Wen Li,1, Divers C1, Linghoi-Smith M2, Lin J3

1Bayer Healthcare Pharmaceuticals, Whippany, NJ, USA, 2Novussys Health, Green Brook, NJ, USA

**OBJECTIVES:** Under the current healthcare system, care is associated with exponentially increasing costs and there is an increasing focus on quality. The objective of this study was to assess the current quality of care landscape in oncology in the US by examining recent actions of national healthcare organizations (HCOS) in oncology. **METHODS:** A literature search and review of national organizations’ websites were conducted to identify national HCOS involved in 5 areas in quality of oncology care, including developing guidelines/care improvement models, developing quality measures, accrediting/crediting providers and health plans, using data to monitor outcomes, and engaging in quality-based reimbursement. The recent activities of these organizations and real-world applications of their quality initiatives were reviewed. **RESULTS:** Multiple national HCOS were identified and assessed. The National Comprehensive Cancer Network (NCCN) disseminates clinical practice guidelines covering 97% of cancers. NCCN, American Society of Clinical Oncology (ASCO), National Committee for Quality Assurance (NCQA), and American College of Medical Directors (ACoM) are all involved in developing quality measures that tie to outcomes of cancer patients. NCQA and ACoS provide accreditation, certification of providers and/or health plans based on quality measures. ACoS and ASCO develop quality measures in the cancer program part II of quality measures. NCQA and the Centers for Medicare & Medicaid Services (CMS) are driving the development of physician-driven, patient-centered, oncology medical homes (OMHs) to provide a continuum of coordinated cancer care. CMS in the spring of 2016 will initiate the Oncology Care Model, which aims to financially incentivize high quality, coordinated care of cancer patients. Emerging data show that implementation of OMHs in the community setting leads to improved patient outcomes. **CONCLUSIONS:** National HCOS are changing the quality of oncology care in the US and implementation of their initiatives in the real-world setting may show improved patient outcomes at lower costs.

**PHS163**

USING CLINICAL DATA TO MONITOR HIGH-COST, PERFORMANCE CODING ISSUES ASSOCIATED WITH PRESSURE ULCERS: A MULTILEVEL ANALYSIS.

Pedulo WY

Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA

**OBJECTIVES:** Hospital-acquired pressure ulcers (HAPUs) have a mortality rate of 11.6%, are costly to treat and result in Medicare reimbursement penalties. Medicare flags HAPUs based on inclusion criteria of Agency for Healthcare Research and Quality (AHRQ) Patient Safety Indicators (PSIs) 3 (PSI-3), but are often inappropriately coded. To use electronic health records to predict pressure ulcers and to identify coding issues leading to penalties. **METHODS:** This study applied a multinomial logistic regression to a retrospective cohort of all pressure ulcer patients in electronic medical records at an academic medical center between 2011-2014. Data for this study contained patient-encounter level demographic variables, diagnoses, prescription drugs and provider orders. HAPUs were defined by PSI-3 stages III, IV, or IX. HAPUs in medical/surgical patients not present-on-admission as a secondary diagnosis, excluding cases of paralytic. Random forests reduced data dimensionality. Multilevel logistic regression of patient-encounters evaluated associations between covariates and HAPU incidence. **RESULTS:** The approach produced a sample population of 21,153 patients with 1,549 PSI-3 cases. The greatest odds ratio (OR) of HAPU occurrence was among patients diagnosed with spinal cord injury (ICD-9 907.2: OR<2.5, P<0.001), and 71% of spinal cord injuries were not properly coded for paralysis, leading to a PSI-03 flag. Other high OBs included bed confinement (ICD-9 V49.84: OR<2.5, P<0.01), and provider-ordered pre-albumin lab (OR<2.5, P<0.01). **CONCLUSIONS:** This analysis identifies spinal cord injuries high-risk for HAPUs and often inappropriately coded without paralysis leading to PSI-03 flags. Inappropriate coding of conditions leads to poor hospital performance measures and Medicare reimbursement penalties. AHRQ should exclude spinal cord injury from PSI-03 flag. This investigation might consider making a payment exception for pressure ulcers concerning spinal cord injury. The resulting statistical model can be tested to predict HAPUs during follow-up.

**PHS164**

REVIEW OF CARDIOVASCULAR QUALITY-OF-CARE METRICS ACROSS DIFFERENT ORGANIZATIONS IN THE UNITED STATES.

Pedguqi U1, Robinson Jr D2, Saadi R3

1Rutgers University, Flemington, NJ, USA, 2University of Illinois at Chicago, Chicago, IL, USA, 3EsSalud, Lima, Peru

**OBJECTIVES:** The prevalence of heart disease continues to rise in the United States, driving mortality rates and healthcare costs. The quality of cardiovascular care is key to both these health outcomes. This narrative literature review examined the review of cardiovascular care metrics now in place among different US health organizations. **METHODS:** Cardiovascular healthcare metrics (n=17) of six health organizations were compared based on their endorsement by the National Quality Forum: Center for Medicare and Medicaid Services (CMS), Agency for Healthcare Research and Quality (AHRQ), American College of Cardiology Foundation (ACCF), American College of Medical Directors (ACMD), Physician’s Consortium for Performance Improvement (PCPI), and National Committee for Quality Assurance (NCQA). **RESULTS:** Considerable variation exists across these organizations with respect to measuring cardiovascular quality of care. A substantial variety of data elements: drug therapy, medication adherence, patient-physician communication, patient education, and prevention and control measures with little agreement across the organizations. The highest concordance was between CMS and ACCF, which shared three measures: 1) aspirin at arrival, 2) ARB for left ventricular systolic dysfunction, and 3) beta-blocker prescribed at discharge. The lower level of concordance exists between CMS and NCQA, with two shared standards: 1) aspirin at arrival and 2) beta-blocker at discharge. CMS and PCPI had one common standard: beta-blocker at discharge. The remainder are single organization measures. **CONCLUSIONS:** This notable variation in quality of cardiovascular care metrics across organizations, where cumulative concordance is 5 of 17 measures, interferes with capturing an overall national picture of cardiovascular medical performance. To unify the diverse approach to measuring healthcare metrics the first step should be in developing a broader set of common quality measures that would facilitate the study and monitoring of cardiovascular care across these organizations and the medical service providers they influence.

**PHS165**

IMPACT OF MISSING DATA IN CRITERIA OF LEAST CONSENSUS ON ACGM NEWBORN SCREENING RECOMMENDATIONS FOR SHORT-CHAIN ACYL-COA DEHYDROGENASE DEFICIENCY.

Vena K1, Rittenhouse B2

1Biogen/MCHS, West, MA, USA, 2Biogen/MCHS University, Boston, MA, USA

**OBJECTIVES:** The American College of Medical Genetics (ACMG) was commissioned to generate post-test- evidence screening recommendations for 84 newborn diseases in the US based upon expert surveys. However, missing data were observed in all conditions. This research aims to determine the implications of assumptions about the impact of missing data on overall ACMG recommendations by utilizing a case-study of the short-chain acyl-CoA dehydrogenase deficiency (SCAD) condition. **METHODS:** Using the SCAD scoring document within the 2006 ACGM report, the two survey criteria of least consensus (the only data reported for the condition) were identified. To determine the importance of ACMG’s implict assumption about missing data in these two criteria (that they were ignorable), boundary estimates were determined by applying best-case and worst-case scoring scenarios to the missing data points (Manski, 1989). The mean scores for the two criteria of least consensus were then recalculated and reapplied to the ACGM scoring algorithm. **RESULTS:** The two criteria of least consensus within the SCAD assessment, “incidence” and “burden if untreated” had 3 and 5 missing data points, respectively. After applying lower and upper boundary estimates for both criteria, final adjusted scores of 1246 and 1261 were calculated, respectively. The lower bound did not reach the critical value of 1200 needed to potentially alter the SCAD recommendation. **CONCLUSIONS:** Based on the adjusted mean final scores of 1246 and 1261, the boundary estimates on the two criteria of least consensus in the SCAD condition would not have altered ACMG recommendations for this condition. However, applying this method to all missing data points could potentially result in a change in recommendations per the ACMG algorithm. This research reinforces continued efforts to appropriately evaluate the ACGM process in developing recommendations for newborn screening and suggests the value of further exploration of uncertainty in ACMG estimates for this and other conditions.

**PHS166**

EXAMINING UNCERTAINTY AROUND AMERICAN COLLEGE OF MEDICAL GENETICS RECOMMENDATIONS FOR NEWBORN SCREENING FOR GALACTOSE EPIMERASE DEFICIENCY.

Baron J, Rittenhouse B1, McPherson T, Boston, MA, USA

**OBJECTIVES:** In 2005 the ACGM reviewed conditions for newborn screening and developed recommendations based largely on scoring each condition through an expert survey. This research explores the influence of uncertainty related to the missing data responses on that scoring to determine if considering missing data (the influence of which was ignored by ACMG) could change scoring sufficiently to alter the GALE recommendation. Manski (1989) has questioned this standard practice (the influence of which was ignored by ACMG) could change scoring sufficiently to alter the recommendation. The number of missing responses was calculable. By assuming all missing responses to generate best-evidence screening recommendations for 84 newborn diseases. The total score determined the entry point to an algorithm (EPA) that determined final recommendations. Cut-off values for different EPAs were at 1200 and at 1000. Survey response data were available for 2 of ACGM’s 18 questions (benefits of initial intervention – BEN_ EARLY INT and benefits of early identification – BEN_ EARLY ID). The number of missing responses was calculable. By assuming all missing responses were at the extremes of possible answers, the Manski bounds on the total score based on re-examining these two questions was calculated. **RESULTS:** The total score changed per BEN_ EARLY INT was -7/+8, while for BEN_ EARLY ID was -4/+4. Considering the score change from examining only two of the 18 questions for which data were available is not sufficient to alter scoring enough to change the EPA and thus the recommendation. **CONCLUSIONS:** ACMG recommendations may have been affected by uncertainty due to the missing data. In this case, we have shown that the score change from examining only two of the 18 questions for which data were available is not sufficient to alter scoring enough to change the EPA and potentially alter the recommendation for GALE. Further exploration of missing data for other questions and/or other types of uncertainty (e.g. sampling variability) may be warranted.

**PHS167**

PNEUMOCOCCINOSIS COSTS AT THE SOCIAL SECURITY OF PERU.

Mora Yaozuchi ME, EsSalud, Lima, Peru